UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,991	02/05/2001	Yoichiro Igarashi	FUJO 17.290	4908

26304   7590   04/20/2005

KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER
EL CHANTI, HUSSEIN A

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 January 2005</u>.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>21,22,24,25 and 29-53</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>21,22,24,25 and 29-53</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to RCE received on Jan. 24, 2005. Claims 33 and 44

were canceled. Claims 21, 22, 24, 25, 29, 34, 42, 45 and 52 were amended. Claims 21,

22, 24, 25, 29-32, 34-43 and 45-53 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 21, 24-25, 29-42 and 52 are rejected under 35 U.S.C. 102(e) as being

anticipated by Millet et al., U.S. Patent No. 6,865,613 (referred to hereafter as Millet).

Millet teaches the invention explicitly as claimed including a system and method

for assigning visiting mobile devices an IP address by a gateway to communicate over

the network (see abstract).

As to claims 29, Millet teaches a proxy communication unit providing

communication services for a correspondent terminal that is communicating with a

mobile terminal through a communication network, said proxy communication unit being

part of the communication network, said proxy communication unit comprising:

a controller for authenticating the correspondent terminal, verifying and setting

the services to be provided to the correspondent terminal and issuing a communication

authorization to the correspondent terminal (see col. 4 lines 37-55, the server registers

the mobile device and the associated IP address and verifies the IP address of the

home agent); and

a message handling unit for generating and receiving packets to and front

distributed physical nodes to exchange information required in providing the

communication services for the correspondent terminal that is communicating with the

mobile terminal, including verifying and setting the services to be provided to the

correspondent terminal among the distributed physical nodes (see col. 4 lines 9-26, the

server registers the IP address of the mobile device and address translation for the

mobile device);

wherein the controller further comprising a cache management unit for storing

and managing a binding cache corresponding to the correspondent terminal by

detecting binding information and providing a correspondence between IP address of

the mobile terminal and an IP address of a foreign agent that is accommodating the

mobile terminal (see col. 4 lines 9-26, the server registers the IP address of the mobile

device and address translation for the mobile device) .

As to claims 30 and 43, Millet teaches the proxy communication unit of claims 29

and 42, further comprising:

a link layer authenticating server for providing authenticating information to said

controller; and a service profile database that stores a service profile of the

correspondent terminal (see col. 6 lines 8-32).

As to claim 31, Millet teaches the proxy communication unit of claim 30, wherein a service profile of the correspondent terminal comprises an identifier for the correspondent terminal, and a service block that describes the specific services to be provided to the correspondent terminal (see col. 7 lines 20-46).

As to claim 32, Millet teaches the proxy communication unit of claim 31, wherein the service block includes a service type, policy information and information specific to the type of service to be provided (see col. 7 lines 20-46).

As to claims 34 and 45, Millet teaches the proxy communication unit of claims 33 and 42, wherein the cache management unit further comprises:

a detecting unit for detecting and receiving a binding cache message corresponding to the correspondent terminal and containing information of the mobile terminal see col. 4 lines 37-55, the server registers the mobile device and the associated IP address and verifies the IP address of the home agent);

a generating unit for generating an entry in a cache table if an entry containing the received binding cache information does not exist (see col. 4 lines 9-26); and

an updating unit for updating the cache table with the received binding cache information if an entry does exist (see col. 4 lines 9-26).

As to claims 35 and 46, Millet teaches the proxy communication unit of claims 34 and 45, further comprising:

a cache storage unit for storing at least one of the cache table, a visitor list and the service profile (see col. 4 lines 9-26).

As to claims 36 and 47, Millet teaches the proxy communication unit of claims 29 and 42, wherein the controller further comprises:

a tunneling unit for generating a tunnel packet including a care-of-address of the mobile terminal (see col. 7 lines 5-45).

As to claims 37, 48 and 50, Millet teaches the proxy communication unit of claims 29 and 42, wherein the controller further comprises:

a mobile agent unit for dynamically registering and deleting a registration of the correspondent terminal where the correspondent terminal implements a mobile IP protocol as a communication protocol (see col. 7 lines 5-45).

As to claims 38, 49 and 51, Millet teaches the proxy communication unit of claims 29 and 42, wherein the controller further comprises:

a visit state unit for verifying that the correspondent terminal is still in an area where the proxy communication unit provides communication services for the correspondent terminal (see col. 4 lines 4-45).

As to claims 39, Millet teaches the proxy communication unit of claim 38, wherein the visit state unit comprises:

a packet monitoring unit for monitoring packet transmission from the correspondent terminal, wherein when a packet from the correspondent terminal is not detected for a predetermined period of time the correspondent terminal is determined to have left the area where the proxy communication unit provides communication services for the mobile terminal and the proxy communication unit deletes a registration of the correspondent terminal (see col. 4 lines 8-26).

As to claim 40, Millet teaches the proxy communication unit of claim 38, wherein the visit state unit comprises:

a packet monitoring unit for monitoring packet transmission from the correspondent terminal and setting a visit state flag to a pending state when a packet from the correspondent terminal is not detected for a predetermined period of time (see col. 5 lines 9-33); and

a determination timer, started when the visit state flag changes to the pending state, wherein when the packet monitoring unit does not detect any packets from the correspondent terminal before the determination timer expires the visit state flag is set to out of area and the proxy communication unit deletes a registration of the correspondent terminal (see col. 4 lines 8-46).

As to claim 41, Millet teaches the proxy communication unit of claim 38, wherein the visit state unit comprises:

a packet monitoring unit for monitoring packet transmission from the correspondent terminal and storing a time of transmission of a packet, wherein when a difference between a present time and the time of transmission is greater than a predetermined period of time the correspondent terminal is determined to have left the area where the proxy communication unit provides communication services for the mobile terminal and the proxy communication unit deletes a registration of the correspondent terminal (see col. 4 lines 25-41 and col. 6 lines 9-33).

As to claim 21, Millet teaches a method of providing a communication service to a correspondent terminal that communicates with a mobile terminal, comprising the steps of:

hunting binding information about the mobile terminal, the binding information being transferred from a home agent of the mobile terminal to the correspondent terminal (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22), and

processing a data packet from the correspondent terminal to the mobile terminal based on the binding information (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22).

As to claim 22, Millet teaches the method of claim 21further comprises tunneling data packet (see col. 7 lines 1-55).

As to claim 24, Millet teaches a proxy correspondent node device which verifies the state of a correspondent terminal when the correspondent terminal is registered with a network and the correspondent terminal may communicate with a mobile terminal in a network composed of a plurality of sub-networks and continues to communicate even when the mobile terminal moves from one network to another sub-network, comprising:

means for setting a visit state flag to an active state when the correspondent terminal is transmitting packets during a registration process;

means for monitoring the flow of packets transmitted from the correspondent terminal (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22);

means for setting the visit state flag to a pending state when the monitoring does not detect a packet flow for a predetermined time period (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22);

means for setting the visit state flag to a left area state when the monitoring does not detect a packet flow for another predetermined time period and the visit state flag is in the pending state;

means for setting the visit state flag to the active state when the monitoring detects a packet flow when the visit state flag is in the pending state and before the another predetermined time period (see col. 4 lines 25-41 and col. 5 lines 9-33); and

means for deleting a visitor list entry for the correspondent terminal based on a service profile and binding cache information relating to path optimization when the visit state flag is in the left area state (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22).

As to claim 25, Millet teaches a proxy correspondent node device which verifies the state of a correspondent terminal when the correspondent terminal is registered with a network and the correspondent terminal may communicate with a mobile terminal in a network composed of a plurality of sub-networks and continues to communicate even when the mobile terminal moves from one sub-network, comprising:

means for setting a visit state flag to an active state when the correspondent terminal is transmitting packets during a registration process;

means for detecting a packet transmitted from the correspondent terminal;

means for setting a timestamp indicating the time of transmission of the detected

packet; means for monitoring a time difference between the timestamp and a current

time (see col. 4 lines 25-41 and col. 5 lines 9-33);

means for determining the correspondent terminal no longer transmitting packets

when the time difference is greater than a predetermined value (see col. 4 lines 25-41

and col. 5 lines 9-33); and

means for deleting a visitor list entry for the correspondent terminal based on a

service profile and binding cache information relating to path optimization when the visit

state flag is in the left area state (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17

lines 4-22).

As to claim 42, Millet teaches a proxy correspondent node device (proxy CN)

which forms a communication system with a correspondent terminal, and provides

communication services for a correspondent terminal that is communicating with a

mobile node, said proxy CN being part of a communication network, said proxy CN

comprising:

a first communication port for communicating with the correspondent terminal;

a second communication port for communicating with the communication

network; and

a controller for controlling the transmitting/receiving of messages in the first

communication port and the second communication port and for receiving a request

message from the correspondent terminal to communicate with the mobile node,

authenticating the correspondent terminal, verifying and setting the services to be

provided to the correspondent terminal and issuing a communication authorization to the correspondent terminal (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22).

As to claim 52, Millet teaches a proxy correspondent node device to accommodate a correspondent terminal which makes a communication with a mobile terminal, comprising:

means for hunting binding information about the mobile terminal, which is transferred from the home agent of the mobile terminal to the correspondent terminal; and

means for processing data packets from the correspondent terminal to the mobile terminal based on the binding information (see col. 4 lines 4-41; col. 6 lines 15-67 and col. 17 lines 4-22).

As to claim 53, Millet teaches the proxy of claim 52 comprising means for transmitting a binding acknowledge message to the home agent which has a request to the home agent that subsequent binding information should be transmitted to the proxy correspondent node device (see col. 4 lines 4-41; col. 6 lines 15-67.

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A. El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.
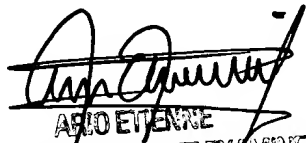
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

April 14, 2005

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER